

**REMARKS**

Applicant has amended the specification with respect to the Examiner's comments in paragraphs 2-4 of the Examiner's Action. In this regard, Applicant has canceled claims 2, 4, 8 and 10-12. Applicant has added new claims 13 through 28 relating to novel compositions and methods of the hot pick-up adhesive of the invention. Certain claims have been amended to recite specific resins and blends. Support for the amendments is found in the original claims as filed and at page 2, lines 15-30; page 4, lines 12-16; page 5, lines 1-15 and page 10, line 8 through page 11, line 2.

Applicant has amended the claims to distinguish the prior art. The prior art, as a whole, are fully formulated also adhesive compositions having a substantial amount (greater than 5 wt% of a base polymer) to form an adhesive system containing a polymer, a resin (a tackifier), a plasticizer and other components. The Examiner should note that in this art the term polymer means a different class of materials than the resin materials used in these compounded blends.

Claim 1, as amended, recites that the claim consists essentially of a hydrogenated synthetic resin, oil and wax. The term "consisting essentially of" indicates that it is free of any base polymer material required by the prior art. The amended claim recites that the percentages are based on the adhesive and that the "adhesive" exhibits the claimed characteristics. No new matter is introduced and support is found in the Experimental section at page 12, line 10 through page 13, line 15.

The Examiner should understand that there is a clear distinction, in this art between the term "synthetic resin" and the term "polymer". In this application and in the adhesive arts in general, the terms "synthetic resin" and "synthetic hydrogenated resin" relate to certain additive materials commonly used as tackifying agents. Polymers in this art relate to ABA block polymers, EVA polymers, etc.

The synthetic resin materials (aromatic C<sub>9</sub> resin, an aliphatic C<sub>5</sub> resin, a C<sub>5</sub>/C<sub>9</sub> blended resin, a dicyclopentadiene resin, an alpha-methylstyrene resin, an alpha-methylstyrene/vinyl toluene resin) are set forth in the application at page 5, line 14 through page 6, line 15. These resins are clearly different from the polymer materials identified in the application at page 7, line 11 through page 8, line 11. The resin materials surprisingly have been found to be useful in hot pick-up label applications whereas the fully functional adhesive materials, such as those in the cited art, are expensive and often hard to machine in these applications. Further, Applicant has

clearly disclosed in the application at page 7, lines 11-17, that only a small amount of the polymer is used to improve cohesive strength of the material. Since most adhesives are formulated with substantial amounts of polymer to produce a broad range of adhesive properties, the use of small amounts of these polymers in the largely resin containing adhesives of the invention is a non-obvious modification of the prior art materials.

Claim 13 recites that the hot melt pick-up adhesive contains less than 5% of a polymer material. Since the prior art typically uses substantially greater than 5 wt% of the polymer to obtain the adhesive properties of the prior art, it would be unobvious to modify the prior art with small amounts of polymer solely for the purpose of improving the cohesive strength of a hot pick-up label adhesive.

Lastly, Applicant has added method claims 18-28 that involve forming a label on a substantially cylindrical container in a typical hot melt pick-up process. The hot pick-up adhesive is placed on the container, the container moves to a pick-up label stack and the label is placed on the adhesive material. Such a process is not disclosed in the prior art.

In paragraphs 2 and 3, the Examiner comments about the claims being indefinite relating to the recited components. Applicant respectfully suggests that the claim amendments render this rejection moot.

In paragraph 4, the Examiner comments that certain claim limitations in the claims as originally filed do not appear to have support in the specification. Applicant has amended the specification on page 9, line 14, after Table 1, to recite the cited limitations from the original claims. No new matter is involved in any of the above amendments to the claims or specification. Support for the amendment is found in claims 1 and 7 as filed.

The Examiner has rejected, in paragraphs 5 through 8, claims 1-3, 5-7, 9-12 under 35 U.S.C. § 102 or § 103 over Horsey et al., U.S. Patent No. 5,128,397. Applicant traverses the rejection. Applicant's amended claims have overcome this rejection to the degree it extended to the original claims.

The Examiner, in great detail, in paragraph 8 discusses the position that there is essentially no difference between the claimed invention and Horsey et al. The Examiner's comments, notwithstanding, the invention relates to a hot pick-up adhesive that contains very little of the typical poly(ethylene-vinyl acetate) such as in Horsey et al. The reference was an poly(ethylene-vinyl acetate) as the base material that cooperates with the other compounded

materials to produce the desired properties. The invention uses the hydrogenated synthetic resin to obtain sufficient hot tack to adhere the label to the cylindrical container. These adhesive properties are achieved without any polymer such as the EVA polymer, ABA block copolymer or other polymer commonly used in the formulation of fully compounded hot melt adhesives.

The claims, as written, are written with the transition phrase "consisting essentially of". That language excludes the typical EVA, ABA, or other polymer component from the reference disclosures. As mentioned, Horsey et al. disclose a poly(ethylene-vinyl acetate) copolymer containing adhesive whereas U.S. Patent No. 5,939,483 teaches an ABA (SBS, SEBS or SIS) block copolymer type containing adhesive. Lastly, De Keyzer et al., U.S. Patent No. 6,657,000 teach a similar hot melt pressure sensitive positioning adhesive using a specific hydrogenated styrene(butadiene or isoprene)-styrene (SBS or SIS) block copolymer combined with an ethylene  $\alpha$ -olefin polymer, a tackifying resin and plasticizing oil. None of the prior art adhesives teach a total formulation having less than about 5 wt% polymer in the formulation. Applicant claims using the transition phrase "consisting essentially of" excludes any important amount of such polymer from the claims. Accordingly, the rejection under 35 U.S.C. § 102(a) is overcome since Applicant's claims are clearly distinct from the prior art polymer containing adhesives. The term "resin" in Applicant's claims is clearly defined to refer to a material that is different than the "polymer" of the prior art.

Applicant's new claim 13 uses the transition phrase "comprising", but recites that the polymer is present in an amount of 0.2 to 5 wt%. This amount of polymer is substantially less than the amount of polymer in the prior art compositions. Modifying the prior art compositions by removing sufficient polymer to form the hot melt pick-up adhesive of the invention would substantially change the viscosity and rheology and adhesive characteristics of the material such that the prior art materials would no longer be suitable for their disclosed purpose. Removing the polymer from the prior art to the claimed levels would substantially increase brittleness, hardness and other adhesive characteristic. Such a modification is unobvious to one of ordinary skill in the art. Further, the prior art suggests that both hydrogenated and unmodified resins are useful in the prior art compositions. Applicant has discovered that the hydrogenated resins have novel properties for use in the hot pick-up adhesives of the invention. The hydrogenated resins are non-toxic, produce no undesirable volatile materials when heated, form excellent pick-up bonds between container and adhesive and are otherwise substantially easier to manufacture,

store and apply in labeling operations. Such advantages are not obvious in light of the teachings of the prior art that natural resins are substantially equivalent to hydrogenated resins.

The Examiner has rejected claims 1-6 under 35 U.S.C. § 102(b) or § 103(a) over Kueppers, U.S. Patent No. 5,939,483. Again, Applicant has amended the claims to exclude the block copolymer material from the Kueppers reference from the claimed materials. Accordingly, the 102(b) rejection is avoided since the claimed material is substantially different than that disclosed by Kueppers. The § 103(a) reference is avoided since it would be unobvious to modify the Kueppers' material by removing the polymer, rendering the material unsuited for its disclosed use in the cited reference.

In Examiner's paragraphs 10-12, the Examiner rejects claims 1-11 under 35 U.S.C. § 103(a) over De Keyzer et al., U.S. Patent No. 6,657,000 B1. Again, Applicant respectfully traverses the rejection. De Keyzer et al. teach a hot melt adhesive that contains a combination of a hydrogenated block copolymer and a homogeneous, linear or substantially linear ethylene based copolymer. Applicant asserts that the claim language using the transition phrase "consisting essentially of" excludes the De Keyzer et al. reference. The "consisting essentially of" language essentially excludes the ABA block copolymer and the ethylene based copolymer from Applicant's claims. It would be unobvious to remove such a polymer from the De Keyzer et al. reference and to modify the other components in hot melt formulation activities.

Applicant has added method claims relating to adhering a label to a cylindrical container using a hot melt pick-up method. In the method, an adhesive layer of the defined compositions are formed on the container, the container is moved to a label stack and a label is adhered to the container in a typical hot melt pick-up method. Such a method is not taught in the cited references and, even if such methods were obvious in light of these references, the use of the materials recited in these method claims would be unobvious in light of the disclosure relating to the adhesives of the references.

### CONCLUSION


Applicant asserts that the prior art does not recognize that a hot melt pick-up labeling adhesive can be formulated, with minimal or no polymer content using only a hydrogenated resin combined with oil and wax. One of ordinary skill in the art, based on the references cited by Applicant and relied on by the Examiner would expect that such an adhesive would contain

substantial amounts of an ABA block copolymer or an ethylene based copolymer typical in hot melt adhesive formulations. The absence of such polymeric materials is unique, surprising, novel and unobvious.

Applicant respectfully requests that the Examiner pass this application to allowance.

Respectfully submitted,

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Date

  
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